1 VQE results Aer Estimator (No Shots)

(Full Hamiltonian) Harmonic Oscillator $\Lambda = 2$ COYBLA Max 10K Iterations

Ansatz	Tolerance	Converged runs	Mean iter	VQE min E.	Δ_{min}	VQE median E.	Δ_{median}	Exact	Time
RA r1 rl	1e−01	100/100	21	1.1123e−05	1.1123e−05	2.6645e−03	2.6645e−03	0e+00	00h 00m 05s
RA r1 rl	1e−02	100/100	37	1.6742e−06	1.6742e−06	3.2582e−05	3.2582e−05	-	00h 00m 07s
RA r1 rl	1e−03	100/100	64	1.6274e−11	1.6274e−11	3.175e−07	3.175e−07	-	00h 00m 11s
RA r1 rl	1e−04	100/100	102	1.4716e−11	1.4716e−11	3.0216e−09	3.0216e−09	-	00h 00m 20s
RA r1 rl	1e−05	100/100	156	2.8407e−12	2.8407e−12	3.2163e−11	3.2163e−11	-	00h 00m 28s
RA r1 rl	1e−06	100/100	153	1.5321e−14	1.5321e−14	2.9463e−13	2.9463e−13	-	00h 00m 27s
RA r1 rl	1e−07	100/100	186	0e+00	0e+00	2.5813e−15	2.5813e−15	-	00h 00m 35s
RA r1 rl	1e−08	100/100	211	0e+00	0e+00	5.5511e−17	5.5511e−17	-	00h 00m 40s
Ansatz	Tolerance	Converged runs	Mean iter	VQE min E.	Δ_{min}	VQE median E.	Δ_{median}	Exact	Time

Table 1